UNITED STATES PATENT AND TRADEMARK OFFICE

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10/723,924	11/26/2003	Erik J. Burckart	RSW9-2003-0239US1 (7161-1	9787

46320 7590 02/27/2007		EXAMINER
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STEVEN M. GREENBERG		
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SUITE 3020		
BOCA RATON, FL 33487		2109

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
Office Action Summary	10/723,924	BURCKART ET AL.
	Examiner	**Art Unit**	
	Daniel Murray	2109	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26NOV2003*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26NOV2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *26NOV2003*.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1.   The information disclosure statements submitted on 26NOV2003 have been considered by the Examiner and made of record in the application.

Specification

2.   The abstract of the disclosure is objected to because of the following informalities:

a) On lines 6 and 7, delete "ones of the" before "idle".

Correction is required. See MPEP § 608.01(b).

3.   35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification are:

a) Paragraph [0003] line 1, insert --an-- before "application".

b) Paragraph [0005] line 2, insert --have-- before "not".

c) Paragraph [0006] lines 7-9, delete "ones of the" before "idle".

d) Paragraph [0017] line 5, delete "ones of the" before "client".

e) Paragraph [0017] lines 4-7, the phraseology "in consequence of which" before "individual" was applied improperly, consider revising.

f) Paragraph [0020] line 1-3, the use of "synchronize" before "the array" is unclear, consider revising.

Appropriate correction is required.

4.   The title of the invention is not descriptive. A new title is required that is clearly indicative

of the invention to which the claims are directed.

Claim Objections

5.   **Claims 1, 5, 7, 8, 11, 15, 17, 18, and 21** objected to because of the following informalities:

a) On **line 4-5 of claim 1,** delete "individual ones of" before "said idle connections".

b) On **line 5 of claim 5,** delete "ones of said" before "idle connections".

c) On **line 7 of claim 5,** insert --the-- before "corresponding", delete "ones of" before "said

subsequent", and delete "ones of said" before "idle connections".

d) On **line 8 of claim 5,** replace "a" with --said individual-- before "timestamp" in order to

provide proper antecedent basis for "timestamp".

e) On **line 10 of claim 5,** replace "a" with --said-- before "timeout" in order to provide

proper antecedent basis for "timeout condition".

f) On **line 12 of claim 5,** replace "said" with "the" before "at least".

g) On **line 2 of claim 6,** replace "a" with --said individual-- before "timestamp" in order to

provide proper antecedent basis for "timestamp".

h) On **line 3 of claim 6,** replace "a" with --said-- before "timeout" in order to provide

proper antecedent basis for "timeout condition".

i) On **line 3 of claim 7,** insert --individual-- before "timestamp" in order to provide proper

antecedent basis for "timestamp".

j) On **line 5 of claim 7,** insert --individual-- before "timestamp" in order to provide proper

antecedent basis for "timestamp".

k) On **line 5** of **claim 7,** delete "exceeds" before "of said oldest".

l) On **line 6** of **claim 7,** replace "a" with --said-- after "that" in order to provide proper antecedent basis for "timeout condition".

m) On **line 2** of **claim 8,** insert --said individual-- before "timestamp" in order to provide proper antecedent basis for "timestamp comparison".

n) On **line 4** of **claim 8,** replace "a" with --said individual-- before "timestamp" in order to provide proper antecedent basis for "timestamp" and delete "a" after "exceeds".

o) On **line 5** of **claim 8,** replace "combination of said" with --said summed-- before "global" and delete "a" before "pre-established".

p) On **line 2** of **claim 13,** replace "a" with --said individual-- before "timestamp" in order to provide proper antecedent basis for "timestamp".

q) On **line 2** of **claim 14,** insert --said-- before "idle" in order to provide proper antecedent basis for "idle connection".

r) On **line 8** of **claim 15,** delete "ones of said" before "idle connections".

s) On **line 10** of **claim 15,** insert --the-- before "corresponding", delete "ones of" before "said subsequent", and delete "ones of said" before "idle connections".

t) On **line 11** of **claim 15,** replace "a" with --said individual-- before "timestamp" in order to provide proper antecedent basis for "timestamp".

u) On **line 12** of **claim 15,** replace "a" with --said-- before "timeout" in order to provide proper antecedent basis for "timeout condition".

v) On **line 13** of **claim 15,** replace "said" with "the" before "at least".

w) On **line 2** of **claim 16,** replace "a" with --said individual-- before "timestamp" in order to provide proper antecedent basis for "timestamp".

x) On **line 3** of **claim 16,** replace "a" with --said-- after "whether" in order to provide proper antecedent basis for "timeout condition".

y) On **line 4** of **claim 17,** insert --individual-- before "timestamp" in order to provide proper antecedent basis for "timestamp".

z) On **line 6** of **claim 17,** insert --individual-- before "timestamp" in order to provide proper antecedent basis for "timestamp".

aa) On **line 6** of **claim 17,** delete "exceeds" before "of said oldest".

bb) On **line 7**of **claim 17,** replace "a" with --said-- after "that" in order to provide proper antecedent basis for "timeout condition".

cc) On **line 8** of **claim 17,** replace "tim out" with --timeout--.

dd) On **line 3** of **claim 18,** insert --said individual-- before "timestamp" in order to provide proper antecedent basis for "timestamp comparison".

ee) On **line 5** of **claim 18,** replace "a" with --said individual-- before "timestamp" in order to provide proper antecedent basis for "timestamp" and delete "a" after "exceeds".

ff) On **line 6** of **claim 18,** replace "combination of said" with --said summed-- before "global" and delete "a" before "pre-established".

gg) On **line 2** of **claim 23,** replace "a" with --said individual-- before "timestamp" in order to provide proper antecedent basis for "timestamp".

hh) On **line 2** of **claim 24,** insert --said-- before "idle" in order to provide proper antecedent basis for "idle connection".

35 U.S.C. 112, second paragraph, requires one or more claims "particularly pointing out and distinctly claiming the subject matter." The claims are replete with terms which are not particular or

distinct. The claims should be revised carefully in order to comply with 35 U.S.C. 112, second

paragraph. Appropriate correction is required.

6.   **Claims 13 and 23** are objected to under 37 CFR 1.75(c), as being of improper dependent

form for failing to further limit the subject matter of a previous claim. Applicant is required to

cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite

the claim(s) in independent form. The "recording a timestamp in said connection pool for each

added one of said idle connections to indicate when said added one of said idle connections had

been added to said connection pool" is already indicated in claims 5 and 15 and thus fails to further

limit the subject matter of the previous claim.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section
> 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the
> subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary
> skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

8.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966),

that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a)

are summarized as follows:

   1.   Determining the scope and contents of the prior art.
   2.   Ascertaining the differences between the prior art and the claims at issue.
   3.   Resolving the level of ordinary skill in the pertinent art.
   4.   Considering objective evidence present in the application indicating obviousness or
            nonobviousness.

9.   This application currently names joint inventors. In considering patentability of the claims

under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was

commonly owned at the time any inventions covered therein were made absent any evidence to the

contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and

invention dates of each claim that was not commonly owned at the time a later invention was made

in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35

U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10.   **Claims 1-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Batra (US

Patent # 6,105,067)** in view of **Chintalapati et al. (US Patent Publication # US 2002/0156897

A1).**

a) Consider **claim 1,** Batra clearly shows and discloses, a connection pool management

system comprising: a connection pool 120 configured to store a plurality of idle connections (figure

4, column 1 lines 10-14, column 3 lines 1-6 lines 24-26, column 7 lines 61-64column 11 lines 51-59);

and, a connection manager 110 programmed for coupling to said connection pool 120 (figure 4,

column 3 lines 45-54, column 7 lines 42-54, column 11 lines 41-59). However, Batra does not

specifically disclose that the connection manager 110 is further programmed to validate individual

ones of said idle connections by issuing a non-blocking input/output (I/O) operation to each of

said individual ones of said idle connections.

In the same field of endeavor, Chintalapati et al. discloses a mechanism for servicing

connections by disassociating processing resources from idle connections and monitoring idle

connections for activity wherein a poll adapter is able to use asynchronous (non-blocking

input/output (I/O) operation) features of the operating system to monitor connections for activity.
(paragraph [0023], paragraph [0024]).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the
invention was made to incorporate the teachings of Chintalapati et al. into the teachings of Batra in
order to validate individual idle connections by issuing an asynchronous (non-blocking) operation.
Such a feature would have made the overall system of Batra more efficient by not issuing blocking
operations to idle connections that would waste resources in order to validate idle connections.

b) Consider **claim 2,** and **as applied to claim 1 above,** Batra as modified by Chintalapati et
al. clearly shows and discloses, said connection pool 120 has an array configuration wherein each
element in said array configuration comprises a timestamp data member (column 11 lines 45-54,
column 12 lines 1-4 lines 12-16) and a reference to one of said idle connections (inherent from the
teachings of Batra since the timestamp is associated with a connection)(column 11 lines 45-51,
column 12 lines 1-4). However, Batra does not specifically disclose the use of an array configuration.

Nonetheless, the Examiner takes Official Notice of the fact that it is notoriously well known
in the art to use and array i.e. data structure for the storage of data elements and members associated
therewith.

Therefore it would have been obvious to one of ordinary skill in the art at the time the
invention was made to use an array configuration, as known in the art, in the system of Batra as
modified by Chintalapati et al. for the purpose of storing connections in a connection pool 120.

c) Consider **claim 3,** and **as applied to claim 1 above,** Batra as modified by Chintalapati et
al. clearly shows and discloses the claimed invention except that said connection pool 120 comprises
a configuration for a last-in first-out (LIFO) ordering of said idle connections.

Nonetheless, the Examiner takes Official Notice of the fact that it is notoriously well known in the art that idle connections could be stored in a data structure configuration for a last-in first-out (LIFO) ordering.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a last-in first-out (LIFO) ordering, as known in the art, in the system of Batra as modified by Chintalapati et al. for the purpose of storing connections in a last-in first-out (LIFO) ordering.

d) Consider **claim 4,** and **as applied to claim 1 above,** Batra as modified by Chintalapati et al. clearly shows and discloses, said connection pool 120 comprises a configuration for storing a global timestamp indicating a time value when an oldest one of idle connections had been added to said connection pool 120 (column 11 lines 41-59).

e) Consider **claims 5 and 15,** Batra clearly shows and discloses, a connection pool management method and a machine readable storage having stored thereon a computer program for connection pool management comprising the steps of: responsive to adding a first one of a plurality of idle connections to a connection pool 120, recording a global timestamp to indicate a time value when said first idle connection had been added to said connection pool 120 (column 11 lines 41-59); responsive to adding subsequent ones of said idle connections to said connection pool 120, recording individual timestamps in said connection pool 120 in association with corresponding ones of said subsequent ones of said idle connections(column 11 lines 44-54, column 12 lines 1-4 lines 12-16); comparing a timestamp of an oldest one of said idle connections to said global timestamp to determine whether a timeout condition has arisen (column 11 lines 41-59). However, Batra does not specifically disclose that responsive to determining that a timeout condition has arisen, probing at

least one of said idle connections with a non-blocking input/output (I/O) request in order to validate said at least one of said idle connections.

In the same field of endeavor, Chintalapati et al. discloses a mechanism for servicing connections by disassociating processing resources from idle connections and monitoring idle connections for activity wherein a poll adapter is able to use asynchronous (non-blocking input/output (I/O) operation) features of the operating system to monitor connections for activity. (paragraph [0023], paragraph [0024]).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Chintalapati et al. into the teachings of Batra in order to validate individual idle connections by issuing an asynchronous (non-blocking) operation. Such a feature would have made the overall system of Batra more efficient by not issuing blocking operations to idle connections that would waste resources in order to validate idle connections.

f) Consider **claims 6 and 16,** and **as applied to claims 5 and 15 above,** Batra as modified by Chintalapati et al. clearly shows and discloses, said comparing step comprises the step of comparing a timestamp associated with a least recently added connection in said connection pool to said global timestamp to determine whether a timeout condition has arisen (column 11 lines 44-59).

g) Consider **claims 7 and 17,** and **as applied to claims 5 and 15 above,** Batra as modified by Chintalapati et al. clearly shows and discloses, said comparing step comprises the steps of: summing said global timestamp and a pre-established timeout value (column 11 lines 45-54); comparing said timestamp of said oldest one of said idle connections with said summed global timestamp and pre-established time out value (column 11 lines 45-49); and, if said timestamp exceeds of said oldest one of said idle connections exceeds said summed global timestamp and pre-established timeout value, concluding that a timeout condition has arisen (column 11 lines 51-59).

h) Consider **claims 8 and 18, and as applied to claims 5 and 15 above,** Batra as modified

by Chintalapati et al. clearly shows and discloses, said probing step comprises the steps of:

sequentially performing timestamp comparisons with said global timestamp for each of said idle

connections in said connection pool 120 (column 11 lines 51-65); However, Batra does not

specifically disclose that for each one of said idle connections having a timestamp which exceeds a

combination of said global timestamp and a pre-established timeout value, attempting a non-

blocking I/O operation over said one of said idle connections.

In the same field of endeavor, Chintalapati et al. discloses a mechanism for servicing

connections by disassociating processing resources from idle connections and monitoring idle

connections for activity wherein a poll adapter is able to use asynchronous (non-blocking

input/output (I/O) operation) features of the operating system to monitor connections for activity.

(paragraph [0023], paragraph [0024]).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the

invention was made to incorporate the teachings of Chintalapati et al. into the teachings of Batra in

order to attempt an asynchronous (non-blocking) operation in which a timestamp which exceeds a

combination of said global timestamp and a pre-established timeout value. Such a feature would

have made the overall system of Batra more efficient by not issuing blocking operations to idle

connections that would waste resources in order to validate idle connections when a timeout

condition occurs.

i) Consider **claims 9 and 19, and as applied to claims 5 and 15 above,** Batra as modified

by Chintalapati et al. clearly shows and discloses, further comprising the step of updating said global

timestamp with a new value subsequent to probing said at least one of said idle connections (column

11 lines 41-59).

j) Consider **claims 10 and 20,** and **as applied to claims 5 and 15 above,** Batra as modified

by Chintalapati et al. clearly shows and discloses the step of provisioning one of said idle

connections responsive to a request to provision an idle connection in said connection pool 120

(column 9 lines 66-67, column 10 lines 1 -16). However, Batra as modified by Chintalapati et al. fails

to disclose that the idle connection to be provisioned is a most recently used idle connection.

Nonetheless, the Examiner takes Official Notice because a last-in first-out (LIFO) ordering

is used to store the idle connections that the most recently used idle connection (i.e. last-in) would

be the first idle connection provisioned (i.e. first-out) should a request for a connection be made.

Therefore it would have been obvious to one of ordinary skill in the art at the time the

invention was made to use a last-in first-out (LIFO) ordering, as known in the art, in the system of

Batra as modified by Chintalapati et al. for the purpose of storing connections in a last-in first-out

(LIFO) ordering such that the most recently used connection would be the first one used for the

next request for an idle connection.

k) Consider **claims 11 and 21,** and **as applied to claims 10 and 20 above,** Batra clearly

shows and discloses, said provisioning step further comprises the steps of: probing said provisioned

idle connection (column 9 lines 66-67, column 10 lines 1-5), where said provisioned idle connection

fails to validate, provisioning another one of said idle connections (inherent from the teachings of

Batra since all idle connections are checked if one fails the test the next connection will)(column 10

lines 9-14). However, Batra does not specifically disclose probing said provisioned idle connection

with a non-blocking input/output (I/O) request in order to validate said provisioned idle

connection or removing said provisioned idle connection from said connection pool 120.

In the same field of endeavor, Chintalapati et al. discloses a mechanism for servicing

connections by disassociating processing resources from idle connections and monitoring idle

connections for activity wherein a poll adapter is able to use asynchronous (non-blocking input/output (I/O) operation) features of the operating system to monitor connections for activity. (paragraph [0023], paragraph [0024]). Furthermore, Chintalapati et al. discloses that if said idle connection is found to be active it is passed to a work queue to await servicing by a processing resource (paragraph [0023] lines 7-9).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Chintalapati et al. into the teachings of Batra in order to attempt an asynchronous (non-blocking) operation in order to probe connections in the connection pool 120 and to remove any connections found which failed to validate. Such a feature would have made the overall system of Batra more efficient by not issuing blocking operations to idle connections that would waste resources in order to validate idle connections and removing connections from the connection pool 120 which failed to validate so that system resources would not be wasted by probing connections which could not be used during subsequent requests for an idle connection.

l) Consider **claims 12 and 22,** and **as applied to claims 5 and 15 above,** Batra as modified by Chintalapati et al. clearly shows and discloses the claimed invention except the step of adding each of said idle connections to said connection pool 120 in a last-in first-out (LIFO) manner.

Nonetheless, the Examiner takes Official Notice of the fact that it is notoriously well known in the art that idle connections could be added to a connection pool 120 in a last-in first-out (LIFO) order.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a last-in first-out (LIFO) ordering, as known in the art, in the system of

Batra as modified by Chintalapati et al. for the purpose of storing connections in a last-in first-out

(LIFO) order.

m) Consider **claims 13 and 23, and as applied to claims 12 and 22 above,** Batra as

modified by Chintalapati et al. clearly shows and discloses, said adding step further comprises the

step of recording a timestamp in said connection pool 120 for each added one of said idle

connections to indicate when said added one of said idle connections had been added to said

connection pool 120 (column 11 lines 45-51).

n) Consider **claims 14 and 24, and as applied to claims 5 and 15 above,** Batra as modified

by Chintalapati et al. clearly shows and discloses, further comprising the step of removing from said

connection pool each idle connection which fails validation in said probing step (column 111 lines

40-65, column 12 lines 10-16).

Conclusion

11.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

> Sayan et al. (US Patent # US 6,477,569 B1) discloses: "Method and Apparatus for Computer
>   Network Management"
> Kamat et al. (US Publication # US 2003/0037263) discloses: " Dynamic Rules-Based Secure
>   Data Access System for Business Computer Platforms"
> Chao et al. (US Patent # US 7,058,717 B2) discloses: "Method and System for Providing
>   Highly Available Services Based on a Load Balancing Policy and a Reusable Connection
>   Context Object"
> Brock et al. (US Patent # US 7,076,556 B1) discloses: "Method and Apparatus for Storage
>   and Retrieval of Connection Data in a Communications System"
> Gerstel (US Patent # US 6,141,325) discloses: "Paradigm for Enabling Interoperability
>   between Different Sub-networks"

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Murray whose telephone number is (571)-270-1773. The examiner can normally be reached on Monday - Friday 0800-1700 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rafael Perez-Gutierrez can be reached on (571)-272-7915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DCM

RAFAEL PEREZ-GUTIERREZ
SUPERVISORY PATENT EXAMINER